



20X Max Portable CD-ROM Drive

User's Guide

OPTIONS
by IBM

Note: If you are using this product in the United States, Canada, or Puerto Rico, be sure to read the information under Appendix E, “Product Warranty and Notices” on page 3-16 before using this information and the product it supports.

For all other countries, the warranty terms and conditions applicable in the country of purchase are available from IBM or your reseller.

First Edition (October 1997)

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Safety: Read First



CAUTION: Read the Safety Information in the Appendix, page 3-1, before installing this product.

Bitte beachten: Vor der Installation dieses Produkts bitte die Sicherheitsinformationen im Anhang (Seite 3-1) durchlesen.

ATTENTION: Lire les Consignes de Sécurité en Annexe, page 3-1, avant d'installer ce produit.

Precaución: Antes de instalar este producto, lea la información sobre seguridad que aparece en el apéndice, páginas 3 a 1.

注意: この製品をインストールする前に、付録ページ3-1の安全に関する表示をお読み下さい。

ATTENZIONE: Prima di procedere all'installazione di questo dispositivo, leggere le Informazioni sulla sicurezza nell'Appendice a

ADVERTÊNCIA: Leia a informação sobre segurança no Apêndice, página 3-1, antes de instalar este produto.

OPOZORNĚNÍ: Před instalací tohoto výrobku si přečtěte Informace o bezpečnosti v Dodatku, str. 3-1.

BEMÆRK: Læs sikkerhedsinformationen i tillægget, side 3-1, før du installerer dette produkt.

LET OP: Voordat dit produkt wordt geïnstalleerd dient de informatie over veiligheid in de bijlage op pagina 3-1 gelezen te worden.

ATTENTION: Avant d'installer ce produit, veuillez lire les renseignements en matière de sécurité à la page 3-1 de l'Annexe.

VAROITUS: Lue liitteen sivulla 3-1 olevat turvallisuusohjeet, ennen tämän laitteen asentamista.

זהירות: קרא את הוראות הבטיחות המופיעות בנספח, עמ' 3-1, לפני התקנת מכשיר זה.

FIGYELMEZTETÉS: Mielőtt beszerezelné a terméket, olvassa el a függelék 3-1 oldalán található biztonsági információkat.

주의: 본 제품을 설치하기 전에 부록의 3쪽 1항에 있는 안전 수칙을 숙독한다.

ADVARSEL: Les informasjonen om sikkerhet i Appendiks, side 3-1, før du installerer dette produktet.

UWAGA: Przed zainstalowaniem tego wyrobu należy przeczytać informację dotyczącą bezpieczeństwa w Załączniku na str. 3-1.

CUIDADO: Leia as Informações de Segurança no Anexo, página 3-1, antes de instalar este produto.

小心: 請在安裝本產品之前仔細閱讀3-1頁附錄中的安全信息。

Opozorilo: Upoštevajte varnostna obvestila v dodatku, stran 3-1., preden napravo instalirate.

WARNING: Läs säkerhetsinformationen i bilagan, sid. 3-1 innan du installerar denna produkt.

About This Book

This book describes how to install the 20X Max Portable CD-ROM Drive and how to use it. This book is divided into three parts:

- Part 1 contains abbreviated installation instructions in the following languages:

English	German
French	Spanish
Italian	Brazilian Portuguese

- Part 2 contains:
 - Product description
 - Illustrations of product features
 - Detailed installation instructions
 - Detailed instructions for use of the CD-ROM drive
- Part 3 contains:
 - Product specifications
 - Problem solving
 - Help and service information
 - Warranty, notices and trademarks

Note: This option comes in two models: a basic model, and a stereo model which adds PCM/MIDI sound capability and has a set of stereo speakers. **The two models cannot be interchanged.**

This book describes each model. Before continuing, check to see which model you have.

Part 1: Quick Installation Guide

The following is an overview of the CD-ROM drive installation instructions. For more detailed instructions, go to “Part 2: User’s Guide” on page 2-1.

In addition to this manual, the option package contains:

- Base model or stereo model of the CD-ROM drive
- PCMCIA card
- AC adapter
- Power cord for the AC adapter
- Interface cable
- Nickel-Cadmium (Ni-Cd) battery pack
- Option Diskette

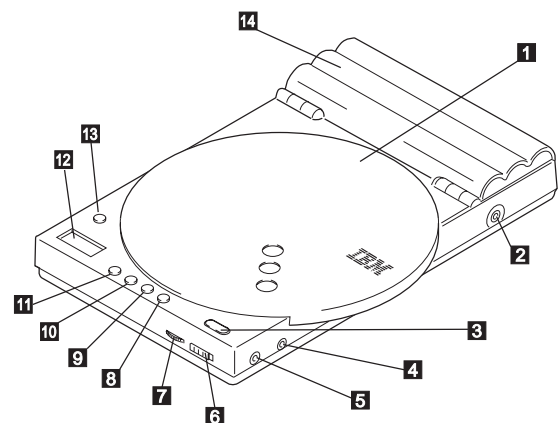
Additional items for the stereo model only:

- Left and right speakers
- 2 speaker cables
- 2 speaker clips

If any item in the option package is missing or damaged, contact your place of purchase. Be sure to retain your proof of purchase; it might be required to receive warranty service.

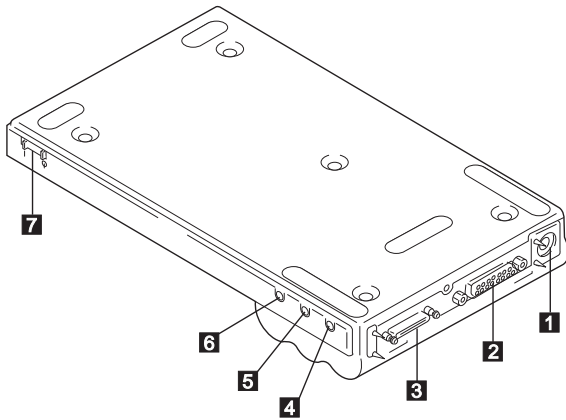
You can use the following illustrations to locate external connectors and controls on both models.

Top



- | | | | |
|----------|---|-----------|------------------------|
| 1 | Disk cover | 8 | Play/pause button |
| 2 | Speaker jack (right)
(stereo model only) | 9 | Stop button |
| 3 | Open button | 10 | Skip button (forward) |
| 4 | Line output jack | 11 | Skip button (backward) |
| 5 | Headphone jack | 12 | Indicator panel |
| 6 | Lock button | 13 | Mode selection button |
| 7 | Volume control | 14 | Battery cover |

Bottom



- | | | | |
|----------|--|----------|--|
| 1 | Power input jack | 5 | Line input jack
(stereo model only) |
| 2 | Game port connector | 6 | Speaker jack (left)
(stereo model only) |
| 3 | Interface connector | 7 | Power switch |
| 4 | Microphone jack
(stereo model only) | | |

Installing the Drive

For your computer to be compatible with the 20X Max Portable CD-ROM Drive, it must include the following:

- PC Card Type II slot
- 3.5-inch diskette drive
- One of the following operating systems installed:
 - DOS 5.0 or later
 - Windows 3.11
 - Windows 95
 - Windows NT 3.51 or 4.0
 - OS/2 Warp V3 or V4
- If you have DOS or Windows 3.11, you need one of the following PCMCIA card support software packages:
 - IBM (PlayAtWill)
 - Phoenix Technology
 - SystemSoft

To install the CD-ROM drive and its device drivers:

- 1** Select a power source for the CD-ROM drive: AC adapter, Ni-Cd battery pack (rechargeable battery pack), or six AA alkaline batteries.

Attention

Be sure to insert and remove the interface cable and PC Card carefully. The connectors on the interface cable are designed to be inserted in only one position; they cannot be inserted upside down. If you try to insert the connectors upside down, you might damage them. Make sure that the pins on the cable connectors are aligned with the holes in the interface connectors. If they are not aligned and you force the connection, you might damage the connectors. Also, if you use excessive force when inserting the PC Card, you might damage the card or your computer.

- 2 Make sure that your computer and the CD-ROM drive are turned off. Squeeze both sides of the large connector on the interface cable, and connect it to the end of the PC Card. Squeeze both sides of the small connector on the interface cable, and connect it to the CD-ROM drive interface connector **3** (Bottom view). Plug the PC Card into an available PC Card slot on your computer.
- 3 Turn on the computer and turn on the CD-ROM drive by moving the power switch **7** (Bottom view) to the ON position.
- 4 Install the device drivers.
 - a. If you are using DOS or Windows 3.11:
 - 1) For DOS: Insert the Option Diskette into drive A. At the DOS prompt type **a:\install**, then follow the

instructions on the screen. When installation completes, restart DOS.

- 2) For Windows 3.11: Insert the Option Diskette into drive A. Using **File Manager**, go to the **File** menu, select **Run**, then type **a:\install** on the command line. You will be prompted to choose one of two installation options.

Automatic installation

The setup program will automatically install the required software into your computer.

Selective installation

The setup program installs the required software into your computer after you specify the following items:

- Software installation destination
- Installation destination directory name
- IRQ number
- I/O base address

- 3) If you have Windows 3.11 and are installing the audio device driver:
 - a) Insert the Option Diskette into drive A. Use File Manager to locate **setup.exe**, then double-click on it.
 - b) Run **Install Driver** and **Install Application** according to the instructions on the screen. Then restart your computer.

- b. If you are using Windows 95: Turn on the computer. Windows 95 recognizes a new drive and displays the **New Hardware** window. Click on **OK** and follow the instructions given in the dialog boxes. When the installation process completes, restart Windows 95.
- c. If you are using OS/2 Warp 3:
- 1) For the base model, insert the Option Diskette into drive A. On your desktop, double-click on the **OS/2 System** folder, then on **System Setup**, then on **Device Driver Install**. Click on **Install** and follow the instructions on the screen. When the installation process completes, shut down and restart OS/2.
 - 2) For the stereo model:
 - a) Verify that the IBM Multimedia Presentation Manager/2 (MMPM/2) is installed on your computer.
 - b) Insert the Option Diskette into drive A. On your desktop, double-click on the **OS/2 System** folder, then on **System Setup**, then on **Device Driver Install**. Click on **Install** and follow the instructions. Shut down the system and restart OS/2.
 - c) Insert the Option Diskette in drive A. Locate **Drive A** using your file manager. When you have done so, double-click on **MINSTALL.EXE**. Select **20X Max Portable CD-ROM Drive**, click on **Install**, and follow the instructions. When the installation process completes, shut down and restart OS/2.
- d. If you are using OS/2 Warp 4:
- 1) For the base model, insert the Option Diskette into drive A. On your desktop, double-click on the **OS/2 System** folder, then on **System Setup**, then on **Install/Remove**, then on **Device Driver Install**. Click on **Install** and follow the instructions on the screen. When the installation process completes, shut down and restart OS/2.
 - 2) For the stereo model:
 - a) Verify that the IBM Multimedia Presentation Manager/2 (MMPM/2) is installed on your computer.
 - b) Insert the Option Diskette into drive A. On your desktop, double-click on the **OS/2 System** folder, then on **System Setup**, then on **Install/Remove**, then on **Device Driver Install**. Click on **Install** and follow the instructions. Shut down the system and restart OS/2.
 - c) Insert the Option Diskette in drive A. Locate **Drive A** using your file manager. When you have done so, double-click on **MINSTALL.EXE**. Select **20X Max Portable CD-ROM Drive**, click on **Install**, and follow the instructions. When the installation process completes, shut down and restart OS/2.

e. If you are using Windows NT:

1) For version 3.51:

- a) Insert the Option Diskette into drive A.
- b) Open the **Main** window, then open **Windows NT Setup**.
- c) Click on **Add/Remove SCSI Adapters**, click on **Add**, then click on **OK**.
- d) Select **Other (Requires a disk from a hardware manufacturer)**. Make sure that drive A has been selected; then click on **OK**.
- e) Check to make sure that **20X Max Portable CD-ROM Drive** is displayed, then click on **OK**.
- f) Click on **Install**, then follow the instructions given on your screen.

2) For version 4.0:

- a) Insert the Option Diskette into drive A.
- b) Open **My Computer** on your desktop, then click on **SCSI Adapter**.
- c) Select the **Driver** tab, then click on **Add**.
- d) Click on **Have disk** in the **Install Driver** window. Check to make sure that drive A is selected, then click on **OK**.

e) Click on **OK** in the Install Driver window, and follow the instructions given on your screen.

Attention

For Ni-Cd Battery Pack Disposal: Dispose of the battery as required by local ordinances or regulations. In the United States, call 1-800-IBM-4333 for disposal information.

Installing the Drive

Introduction

When used as a CD-ROM drive, the 20X Max Portable CD-ROM Drive can operate at up to either 10 times the speed of an audio CD player (power-saving mode), or 20 times the speed of an audio CD player (normal mode). You can use the CD-ROM drive connected to your computer, or as a portable audio CD player. The drive comes in two models:

- Base model

The base model is a portable CD-ROM drive that does not include an audio device driver or speakers. To hear sound with the base model, you must supply your own headphones or external speakers, and your computer must have an audio device driver previously installed.

- Stereo model

The stereo model is a portable CD-ROM drive that includes an audio device driver, PCM/MIDI sound capability, and removable speakers.

The illustrations in this manual can be used to locate controls and external connectors on both models.

The drive has three power source options: AC adapter, Nickel-Cadmium (Ni-Cd) battery pack, and alkaline batteries (available at stores).

In addition to this manual, the option package contains:

- Base model or stereo model of the CD-ROM drive
- PCMCIA card
- AC adapter
- Power cord for the AC adapter
- Interface cable
- Nickel-Cadmium (Ni-Cd) battery pack
- Option Diskette

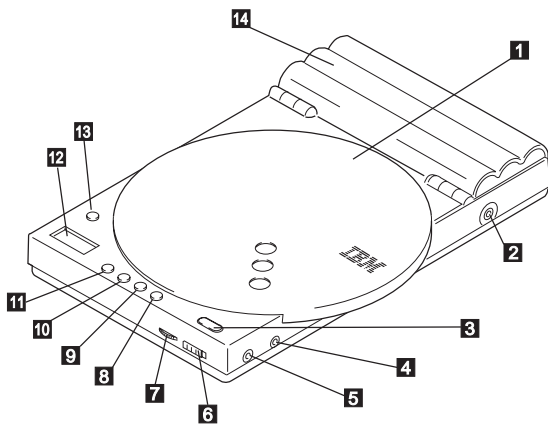
Additional items for the stereo model only:

- Left and right speakers
- 2 speaker cables
- 2 speaker clips

If any item in the option package is missing or damaged, contact your place of purchase. Be sure to retain your proof of purchase; it might be required to receive warranty service.

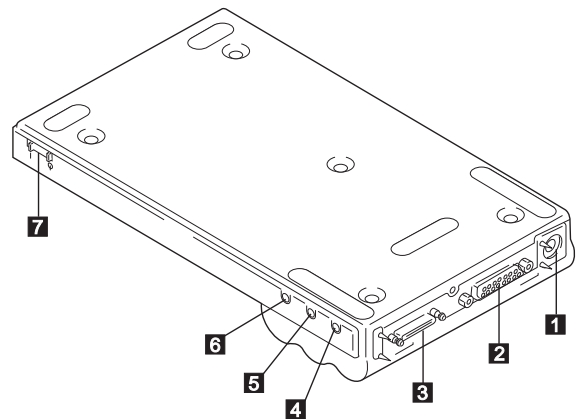
The following illustrations show the top and bottom views of the drive, identifying the connectors and controls.

Top



- | | |
|--|----------------------------------|
| 1 Disk cover | 8 Play/pause button |
| 2 Speaker jack (right)
(stereo model only) | 9 Stop button |
| 3 Open button | 10 Skip button (forward) |
| 4 Line output jack | 11 Skip button (backward) |
| 5 Headphone jack | 12 Indicator panel |
| 6 Lock button | 13 Mode selection button |
| 7 Volume control | 14 Battery cover |

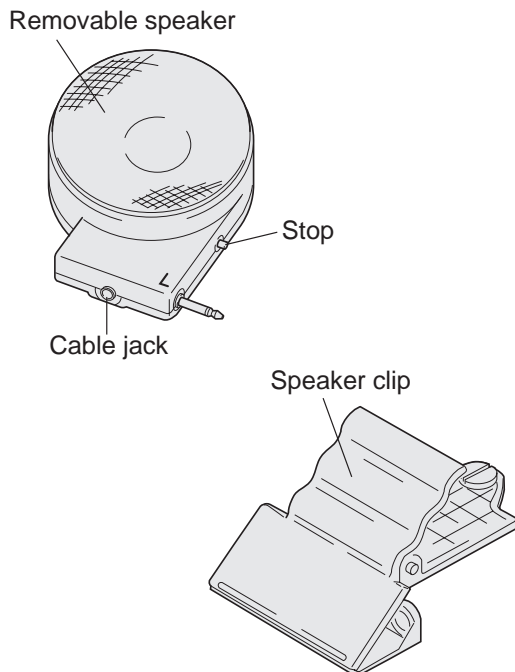
Bottom



- | | |
|---|---|
| 1 Power input jack | 5 Line input jack
(stereo model only) |
| 2 Game port connector | 6 Speaker jack (left)
(stereo model only) |
| 3 Interface connector | 7 Power switch |
| 4 Microphone jack
(stereo model only) | |

The following illustrations show the additional accessories which come with the stereo model.

Accessories (Stereo Model Only)



External Connectors of the Drive

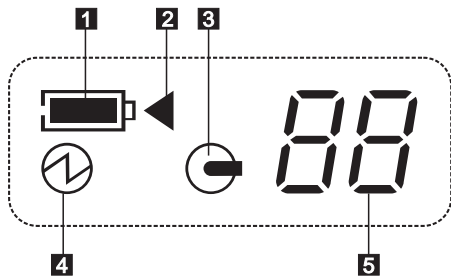
You can use the CD-ROM drive to read data CDs or play audio CDs. These functions are described in “Using the Drive” on page 2-25. The drive's external connectors (refer to the illustrations on page 2-2) allow you to:

- Send an audio signal to an external audio system using the line out jack **4** (Top view).
- Connect headphones using the headphone jack **5** (Top view).
- Connect a joystick or gamepad using the game port connector **2** (Bottom view) to play games on the stereo model.
- Feed the audio signal into the drive using the line input jack **5** (Bottom view) on the stereo model, so that you can:
 - Listen to the sound on the drive speakers.
 - Route the signal to the computer for recording digital audio files.
- Connect a microphone using the microphone jack **5** (Bottom view) on the stereo model, so that you can:
 - Hear the sound through the speakers.
 - Route the audio signal to the computer for recording digital audio files.
- Route the audio signal or digital data from the drive to the computer through the interface connector **3** (Bottom view).

On the stereo model, the speakers do not operate when headphones are connected to the headphone jack **5** (Top view).

Indicator Panel

Use the indicator panel to determine the operational state of the CD-ROM drive. The following illustration shows the position of each indicator on the display panel when the indicator is active. The table shows the meaning of each indicator.



No.	Indicator	Description
5	00	On The number of the track being played. Flashing The track being played is paused.
	H1	High (normal mode) is indicated when the speed is up to 20 times that of an ordinary audio CD player.
	L0	Low (power saving mode) is indicated when the speed is up to 10 times that of an ordinary audio CD player.

No.	Indicator	Description
1		On The battery is charged. Flashing The battery is low.
2		The battery is being charged. This indicator disappears when charging is completed. (For more information, see "Installing the Ni-Cd Battery Pack" on page 2-8.)
3		The CD-ROM drive is in use.
4		Power is on.

Installation Requirements

For your computer to be compatible with the 20X Max Portable CD-ROM Drive, it must include the following:

- PC Card Type II slot
- 3.5-inch diskette drive
- One of the following operating systems installed:
 - DOS 5.0 or later
 - Windows 3.11
 - Windows 95
 - Windows NT 3.51 or 4.0
 - OS/2 Warp V3 or V4
- If you have DOS or Windows 3.11, you need one of the following PCMCIA card support software packages:
 - IBM (PlayAtWill)
 - Phoenix Technology
 - SystemSoft

Note

The stereo model sound function might not be available on some computers.

Handling Instructions

Read these instructions to preserve and care for the CD-ROM drive:

- Use only the AC adapter in the options package with the drive. Only use the Ni-Cd battery pack that comes with the CD-ROM drive. Dispose of the battery as required by local ordinances or regulations. In the United States, call 1-800-IBM-4333 for disposal information.
- Do not hold the drive by the CD cover when the cover is open.
- Do not hold the drive by the speakers (stereo model only).
- Do not expose the drive to:
 - High temperature or direct sunlight
 - Excessive dust
 - Excessive vibration or sudden shock
 - Abrupt changes in temperature (condensation might develop)
 - High humidity (this might affect proper operation)
- Do not press hard on the cover or stack objects on the drive.
- Do not use a strong solution such as benzene or thinner to clean the drive. The solvent causes deformation or discoloration.

Use the following steps to connect and install the software for the CD-ROM drive. Refer to the illustrations of the top and bottom of the drive (page 2-2) to identify the external connectors and controls.

Step 1. Connecting the Power Source

Select a power source to operate the CD-ROM drive:

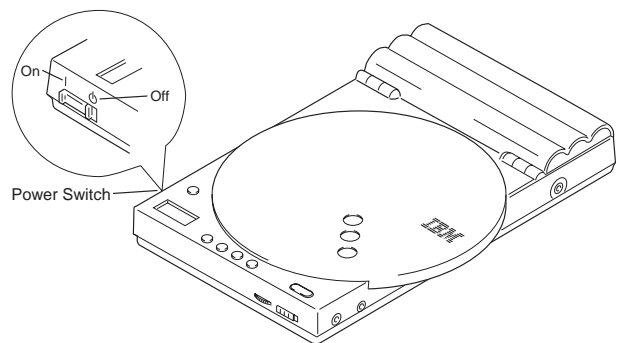
- AC adapter connected to a power outlet
- Ni-Cd battery pack
- Six AA alkaline batteries

This step also includes Ni-Cd battery pack recharging instructions.

Connecting the AC Adapter

To use the AC Adapter, do the following:

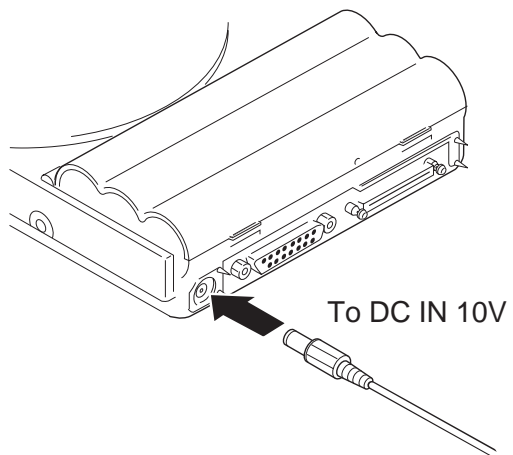
- 1** Make sure that the power switch of the CD-ROM drive is off.



Attention

Do not use an AC Adapter other than the one provided. If you do, you might damage the CD-ROM drive.

- 2 Connect the AC Adapter to the CD-ROM drive.

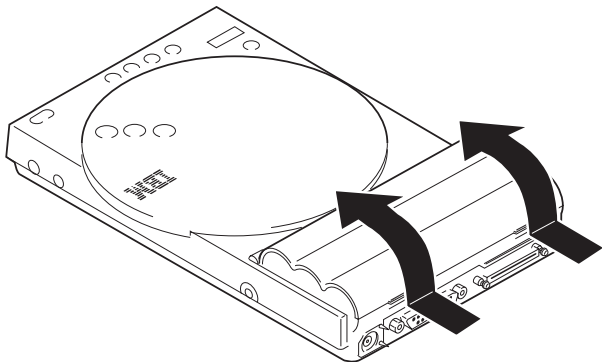


- 3 Connect the AC Adapter to a power outlet.
- 4 Turn on the power switch of the CD-ROM drive.

Installing the Ni-Cd Battery Pack

To use the battery pack, follow these steps:

- 1 Make sure that the power switch of the CD-ROM drive is off.
- 2 Open the battery cover by gently pushing the two protruding clips as shown.



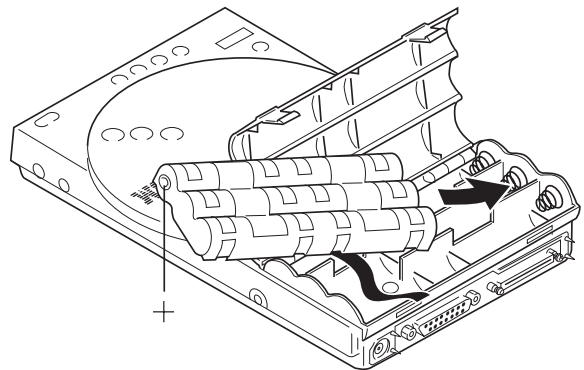
- 3 Slide the battery pack into the drive.

The positive end (+) of each battery has a protrusion. This end should be opposite the springs.

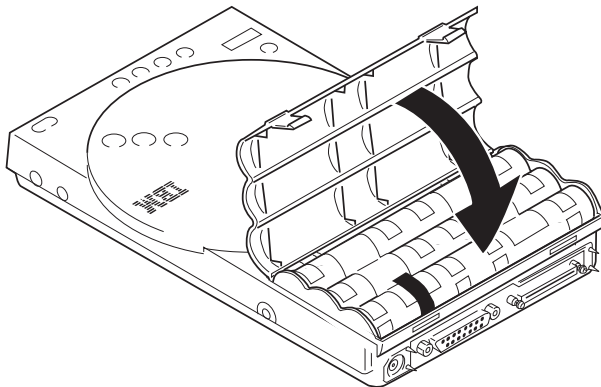
Attention


Do not insert the battery pack into the CD-ROM drive with the polarity reversed.

Install the battery pack with the label facing upward. To allow for later easy removal of the battery pack, extend the ribbon below the battery pack. To remove the battery pack, lift the ribbon.




- 4 Close the battery cover.



The battery begins to charge, and the charging () indicator on the indicator panel appears. After about 5 hours, the indicator disappears, and charging is complete.

Note: If the battery charge becomes low soon after charging, try to discharge the battery completely and then fully recharge it. If the charge still becomes low in a short period, the battery needs to be replaced. Contact your place of purchase to get a new one.

Charging the Ni-Cd Battery Pack

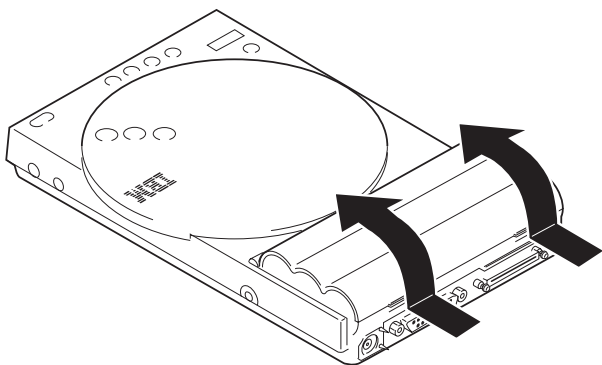
If the battery pack charge is low, the battery () indicator flashes. To charge the battery pack, do the following:

- 1 Make sure that the battery pack is installed in the CD-ROM drive.
- 2 Turn off the power switch.
- 3 Connect the AC Adapter to the CD-ROM drive and to a power outlet (see “Connecting the AC Adapter” on page 2-6).
- 4 Press the Play/Pause button.

Installing Alkaline Batteries

To use alkaline batteries, follow these steps:

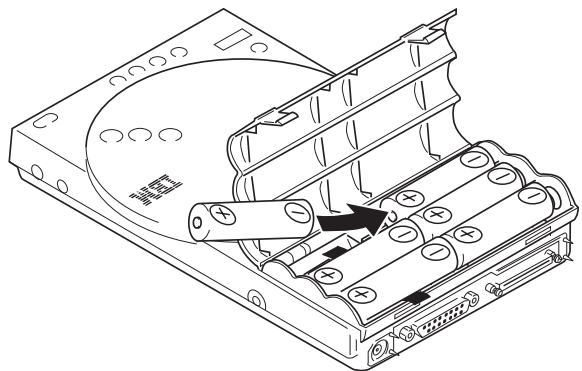
- 1** Make sure that the power switch of the CD-ROM drive is off.
- 2** Open the battery cover by gently pushing the two protruding clips as shown.



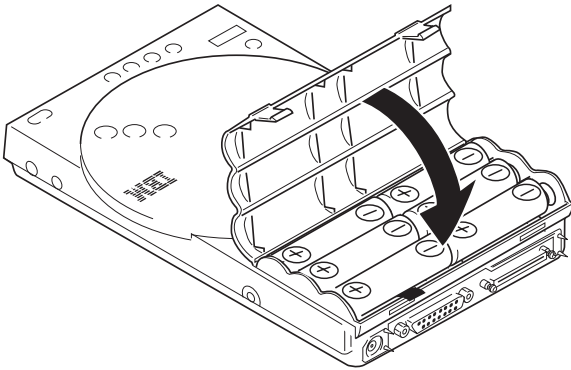
Attention

Do not combine new and used batteries.

- 3** Install six alkaline AA batteries into the battery compartment with their polarities facing as shown.



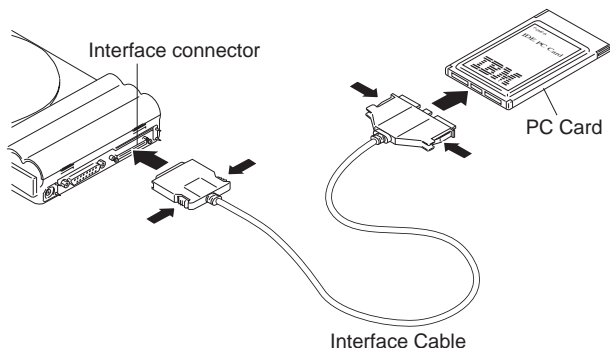
4 Close the battery cover.



Step 2. Connecting the Drive

This section describes how to connect the CD-ROM drive to your computer.

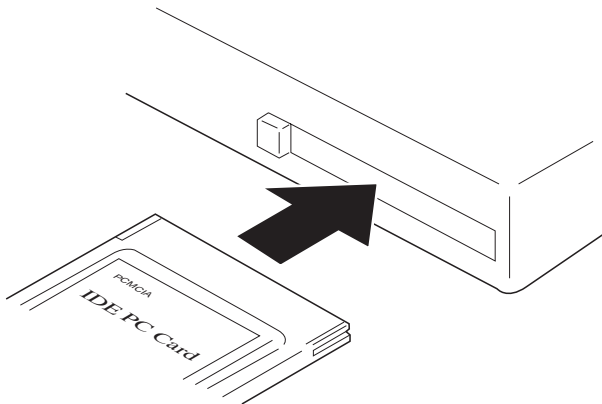
- 1** Make sure that the power switches on the CD-ROM drive and your computer are turned off.
- 2** Squeeze both sides of the small connector on the interface cable, and connect it to the interface connector on the CD-ROM drive, as shown in the illustration.
- 3** Squeeze both sides of the large connector on the interface cable, and connect it to the connector on the PC Card, as shown in the illustration.



Attention

Be sure to insert and remove the interface cable and PC Card carefully. The connectors on the interface cable are designed to be inserted in only one position; they cannot be inserted upside down. If you try to insert the connectors upside down, you might damage them. Make sure that the pins on the cable connectors are aligned with the holes in the interface connectors. If they are not aligned and you force the connection, you might damage the connectors. Also, if you use excessive force when inserting the PC Card, you might damage the card or your computer.

- 4 Insert the PC Card into the PC Card slot on your computer.



Attention

Depending on your computer, the PC Card might need to be inserted face up or face down; do not apply unnecessary force during the connection.

Operating system	Refer to page
DOS or Windows 3.11	2-14
Windows 95	2-15
Windows NT	2-18
OS/2 Warp	2-19

Note

If your laptop computer has only one PC Card slot and you need a PC Card slot to connect the diskette drive, create a subdirectory on the hard disk drive and copy the Option Diskette to it. You will then use the data in that subdirectory instead of using the Option Diskette in the following procedures.

Step 3. Installing the Device Driver

To operate the 20X Max Portable CD-ROM Drive with your computer, first install the device driver (or drivers) according to your operating system, as shown in the following table:

DOS or Windows 3.11

Attention

- Remove any other PC Cards from your computer.
- The device driver cannot be installed from a Windows MS-DOS prompt. **You must exit Windows 3.11 before installing the device driver.**

- 1** Make sure the CD-ROM drive is correctly connected to the PC Card and that the PC Card is inserted into a PC Card slot on your computer. Turn on your computer and the CD-ROM drive.
- 2** Insert the Option Diskette into the diskette drive.
- 3** Type A:\INSTALL and press **Enter**.
- 4** You will be prompted by the setup program to select one of the following option.

Automatic installation

The setup program will automatically install the required software into your computer.

Selective installation

The setup program installs the required software into your computer after you specify the following items:

- Software installation destination
- Installation destination directory name
- IRQ number
- I/O base address

When you have selected which installation you want, press **Enter**.

- 5** When the installation process is complete, restart your computer.

You can now use the base model CD-ROM drive with DOS or Windows 3.11, or the stereo model with Windows 3.11.

Installing the Audio Driver (Stereo Model Only)

Note

- Before installing the stereo model audio device driver, delete any other sound function previously installed under DOS or Windows.
- The stereo model sound functions do not work in DOS.
- The game port on the CD-ROM drive is incompatible with both DOS and Windows 3.11.

To install the sound function of the stereo model, follow these steps :

- 1** Insert the Option Diskette into the diskette drive.
- 2** Open **File Manager**, select the diskette drive, and double click on the file **SETUP.EXE**.
- 3** Run **Install Driver** and **Install Application** according to the instructions on the screen.
- 4** When the installation is complete, restart your computer.

For more information on how to use the stereo model, see "Using Sound Functions (Stereo Model Only)" on page 2-34.

Optional Device Driver Settings

You can specify the following options for use with the CD-ROM drive device driver:

```
DEVICE=C:\CD20X\PCMCDD20X.SYS /I:nn /P:nnn /D:aaaaaaaa
```

/I:nn IRQ level. An IRQ number is assigned to the sound function (decimal).

/P:nnn I/O base address. The sound function is mapped from this address (hexadecimal).

/D:aaaaaaaa Device name. The name specified for the device should be the same as for the MSCDEX.

Windows 95

This section contains installation instructions for the base model and the stereo model separately. Follow the instructions for your model.

Attention

Do not interrupt the system during installation.

Close all other applications before installing the device driver.

Base Model

- 1** Turn on your computer.
- 2** After connecting the PC Card to the CD-ROM drive with the interface cable, turn on the power switch of the CD-ROM drive. Then insert the PC Card into the PC Card slot on your computer.
- 3** The **New Hardware Found** dialog box is displayed. Follow the instructions in the dialog box.
- 4** Insert the Option Diskette (provided) into the diskette drive.
- 5** Check that the diskette drive (for example, A:\) has been selected; click on **OK**.
- 6** You may get a message stating that the driver on your system is a newer version than the one on the Option Diskette. If this

occurs, the setup program will ask if you want to keep the device driver you have. Select **Yes**.

- 7 When the message Do you want to restart your computer now? appears, remove the Option Diskette and click on **Yes**. Your computer will automatically restart.

You can now use the base model functions with Windows 95.

Stereo Model

- 1 Turn on your computer.
- 2 After connecting the PC Card to the stereo model with the interface cable, turn on the CD-ROM drive.
- 3 Insert the PC Card into the PC Card slot on your computer. The **New Hardware Found** dialog box is displayed. Follow the instructions in the dialog box.
- 4 Insert the Option Diskette (provided) into the diskette drive.
- 5 Check that the diskette drive (for example, A:\) has been selected; click on **OK**.
- 6 When the message "Do you want to restart your computer now?" appears, remove the Option Diskette and click on **Yes** to restart your computer.
- 7 The stereo model has one device driver for the CD-ROM drive itself, one device driver for the audio function, and one for the joystick/gamepad function. If you do not have a sound device

driver or joystick device driver already installed on your system, the setup program will recognize each device driver separately. If this happens, you will repeat steps 3, 4, and 5 until all the necessary drivers have been installed. **If you have already installed a device driver for a joystick or sound card, this step may not apply to your system.**

- 8 You may get a message stating that the driver on your system is a newer version than the one on the Option Diskette. If this occurs, the setup program will ask if you want to keep the device driver you have. Select **Yes**.
- 9 Windows 95 will prompt you to restart your computer after recognizing each individual device driver. When you see this prompt, remove the Option Diskette and click on **Yes** and your computer will automatically restart.

You can now use the stereo model functions with Windows 95.

Duplicate Sound Functions

With Windows 95, other sound functions installed in your computer do not interfere with the stereo model sound function.

If you have other sound functions but want to use the stereo model sound function, open **Multimedia** in the Control Panel, and specify the following:

Playback	20X Max Audio Driver
Recording	20X Max Audio Driver
MIDI	Internal ESS ESFM Synthesize

Windows NT

This section contains separate installation instructions for Windows NT Version 3.51 and Version 4.0. Read the explanation appropriate to your version.

Note

Windows NT does **not** support the stereo sound function on the stereo model CD-ROM drive.

Version 3.51

- 1** Check that your computer and your CD-ROM drive are connected correctly; turn on your computer and CD-ROM drive and start Windows NT 3.51.
- 2** Open **Main**; then click on **Windows NT Setup**.
- 3** Click on **Add/Remove SCSI Adapters** in the Options window.
- 4** Click on **Add** confirm **Setup Message**, and click on **OK**.
- 5** Select **Other (Requires a disk from a hardware manufacturer)** from the list of adapters.
- 6** Insert the Option Diskette (provided) into the diskette drive.
- 7** Check that the diskette drive (for example, A:\) has been selected; click on **OK**.

- 8** Check that **20X Max Portable CD-ROM Drive** is displayed; click on **OK**.
- 9** Click on **Install**.
- 10** Click on **Continue**.
- 11** Click on **Close**.
- 12** Select **Exit** in the Options window and click on **OK**.
- 13** Click on **Shutdown** from the File menu in Program Manager.
- 14** Select **Shutdown and Restart** and click on **OK**.
- 15** Remove the Option Diskette from your computer and restart the system.

You can now use the CD-ROM drive functions with Windows NT 3.51.

Version 4.0

- 1** Check that your computer and your CD-ROM drive are connected correctly; turn on your computer and your CD-ROM drive and start Windows NT 4.0.
- 2** Open **My Computer** in the desktop double-click on the **SCSI Adapter** icon in the Control Panel.
- 3** Select the **Driver** tab; then click on the **Add** button.
- 4** Click on **Have Disk** in the Install Driver window.
- 5** Insert the Option Diskette (provided) into the diskette drive.
- 6** Check that the diskette drive (for example, A:\) has been selected; click on **OK**.
- 7** Click on **OK** in the Install Driver window.
- 8** Check that the diskette drive (for example, A:\) has been selected and click on **Continue**.
- 9** When the message Do you want to restart your computer now? appears, remove the Option Diskette and click on **Yes** to restart your computer.

You can now use the CD-ROM drive functions with Windows NT 4.0.

OS/2 Warp

- 1** Check that the your computer and your CD-ROM drive are connected correctly, and turn on your computer and the CD-ROM drive.
- 2** Insert the Option Diskette (provided) into the diskette drive.
- 3** Do one of the following, depending on your version:
 - **Warp Version 3:** Open **OS/2 System, System Setup, and Device Driver Install**.
 - **Warp Version 4:** Open **OS/2 System, System Setup, Install/Remove, and Device Driver Install**.
- 4** Click on **Install**.
- 5** Continue installation according to the instructions on the screen. Click on **Exit** when installation is complete.
- 6** Do one of the following, depending on your version:
 - **Warp Version 3:** Open **OS/2 System, System Setup, and Selective Install**.
 - **Warp Version 4:** Open **OS/2 System, System Setup, Install/Remove, and Selective Install**.
- 7** Check the CD-ROM drive field in the System Configuration window.

If the field contains **None**:

- *For Warp Version 3:* Select **OTHER** and go to step 9.
- *For Warp Version 4:* Select **IDE CD-ROM** and go to step 9.

If the field does not contain **None**, go to step 8.

8 Close the System Configuration window.

If the message Installation is not completed. Select Cancel to continue installing additional hardware or software. Otherwise, select OK appears, click on **OK**.

Go to step 11.

9 Click on **Install** in the OS/2 Setup and Installation window.

Continue installation according to the instructions on the screen.

10 If a message appears telling you to restart your system, click on **OK**.

11 Restart your computer.

You can now use the CD-ROM drive functions with OS/2 Warp.

Installing the Audio Device Driver (Stereo Model Only)

Note

The sound function only works in the standard OS/2 environment; it does not work in WIN-OS/2.

To install the software for the stereo model sound function, complete the following steps:

1 Do one of the following, depending on your version:

- *Warp Version 3:* Open **OS/2 System, System Setup, and Selective Install**.
- *Warp Version 4:* Open **OS/2 System, System Setup, Install/Remove, and Selective Install**.

2 Do one of the following, depending on your version:

- *Warp Version 3:* Click on **OK** in the System Configuration window.
- *Warp Version 4:* Click on **Next** in the System Configuration window and then in the System Configuration (cont.) window.

3 Check **Multimedia Software Support** in the OS/2 Setup and Installation window.

- *For Warp Version 3:* Click on **Install**.

- *For Warp Version 4:* Click on **Next**.
- 4** Click on **OK** when installation is complete.
 - 5** Restart your computer.
 - 6** Insert the Option Diskette (provided) into the diskette drive.
 - 7** Open **OS/2 System** and then **Drive**.
 - 8** Open the diskette drive (drive A or B) into which you inserted the diskette.
 - 9** Run MINSTALL.EXE on the Option Diskette.
 - *For Warp Version 3:* Select the Warp 3 directory on the MINSTALL window.
 - *For Warp Version 4:* Select the Warp 4 directory on the MINSTALL window.
 - 10** Select **20X Max Portable CD-ROM Drive Stereo Model** and then click on **Install**.
 - 11** Click on **Yes** on the window displaying message Change MMPM2-CONFIG.SYS.
 - 12** Check that the number of devices is 1 on the Multimedia Installation window and click on **OK**.
 - 13** Click on **OK** in the window displaying the message MMPM2-CONFIG.SYS has been changed.

14 Click on **OK** in the window displaying the message MMPM2 multimedia installation successful.

15 Restart your computer.

You can now use the stereo model functions with OS/2 Warp.

Duplicate Sound Functions

Even if sound functions have already been installed in your computer, with OS/2 you can install additional sound functions for the stereo model.

If the existing sound functions include the **Digital Audio** and **MIDI** tabs in a **Multimedia** folder, install the stereo model with **Digital Audio 2** and **MIDI 2** tabs.

Note: If you already have installed another audio device, you might need to use the **Digital Audio 3** and **MIDI 3** tabs in the Multimedia folder instead of **Digital Audio 2** or **MIDI 2**.

To work with .WAV and MIDI files using the stereo model, click on **Digital Audio 2** or **MIDI 2**.

You can assign specific sounds to system events, for example having a chime sound when you close a window. If you want to assign sounds to system events using the stereo model, or if you want to have the computer use the CD-ROM drive automatically when you open files with WAV or MID extensions, set up OS/2 according to following steps.

Warp Version 3

For Digital Audio (WAVE) setup:

- 1** Open **Multimedia Setup** in the **Multimedia** folder.
- 2** Select the **Digital Audio** tab, and then remove the check mark from the **Default Waveaudio** device.
- 3** Click on the right arrow at the bottom right corner of the dialog window.
- 4** Select **WAV** in the **Current** extensions.
- 5** Move the cursor to the **New** extension. Then press the Space bar and click on **Remove**.
- 6** Select the **Digital Audio 2** tab. Then check the **Default Waveaudio** device.
- 7** Click on the right arrow at the bottom right corner of the dialog window.
- 8** Type **WAV** at the **New** extension, and then click on **Add**.
- 9** Close Multimedia Setup.

For Sequencer (MIDI) setup:

- 1** Open **Multimedia Setup** in the **Multimedia** folder.

- 2** Select the **MIDI** tab, and then remove the check mark from the **Default Sequencer** device.
- 3** Click on the right arrow at the bottom right corner of the dialog window.
- 4** Select **MID** in the **Current** extensions.
- 5** Move the cursor to the **Next** extension. Then press the Space bar and the click on **Remove**.
- 6** Select the **MIDI 2** tab. Then check the **Default Sequencer** device.
- 7** Click on the right arrow at the bottom right corner of the dialog window.
- 8** Type **MID** at the **New** extension, and then click on **Add**.
- 9** Close Multimedia Setup.

Warp Version 4

For Digital Audio (WAVE) setup:

- 1** Run STPM.EXE in the MMOS2 directory.
- 2** Select the **Digital Audio** tab. Then remove the check mark from the **Default Digital** device.
- 3** Click on the + mark at the top right corner of the Digital Audio window.
- 4** Select **WAV** in the **Current** extensions.
- 5** Move the cursor to the **New** extension. Then press the Space bar and click on **Remove**.
- 6** Select the **Digital Audio 2** tab. Then check the **Default Digital** device.
- 7** Click on the + mark at the top right corner of the **Digital Audio** window.
- 8** Type **WAV** at the **New** extension, and then click on **Add**.
- 9** Close Multimedia Setup.

For Sequencer (MIDI) setup:

- 1** Run STPM.EXE in the MMOS2 directory.

- 2** Select the MIDI tab. Then remove the check mark from the **Default Sequencer** device.
- 3** Click on the + mark at the top right corner of the dialog window.
- 4** Select **MID** in the **Current** extensions.
- 5** Move the cursor to the **Next** extension. Then press the Space bar and click on **Remove**.
- 6** Select the **MIDI 2** tab. Then check the **Default Sequencer** device.
- 7** Click on the + mark at the top right corner of the dialog window.
- 8** Type **MID** at the **New** extension, and then click on **Add**.
- 9** Close Multimedia Setup.

Optional Device Driver Settings

The following options can be specified for the CD-ROM device driver:

`/P:nn` I/O base address. The sound function is mapped from this address (hexadecimal).
`/EXIRQ:n` The specified IRQ number is excluded. Another IRQ number is assigned to the sound function.
`/NOBEEP` The device does not beep at insertion of the PC card.

Step 4. Completing the Installation

Ensure that you have shut down and restarted the operating system so that you can use the drive. Following are some additional notes on the installation process:

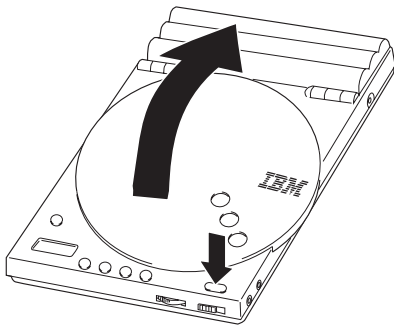
- If you have two or more PC Card slots on your PC, you can use any slot for the CD-ROM drive. The drive letter assigned to the CD-ROM is independent from the PC Card slot number.
- If you are using the base model and you want to play a CD-ROM game using sound, your computer must have an installed sound function.
- You can use only one CD-ROM drive with your computer even if your computer has more than one PC Card slot.
- If you install another PC Card while you are using your CD-ROM drive, your CD-ROM drive might be disabled.

Using the Drive

Inserting and Removing the Disk

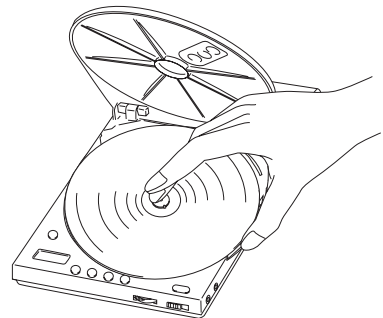
To insert a CD-ROM or audio CD:

- 1 Press the **Open** button to release the CD cover.

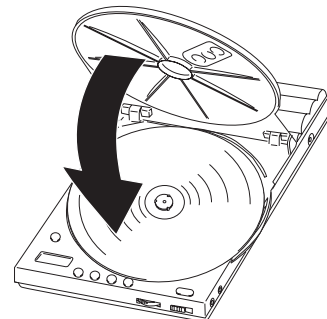


- 2 Lift the CD cover up until it snaps into the open position.

- 3 Insert the disk as shown. Be careful to hold the CD only by the outside or inside edges. Fit the disk to the center pivot. Firmly press the disk down until you hear it click into place.

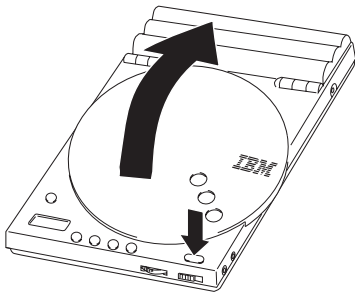


- 4 Close the cover.



To remove a CD:

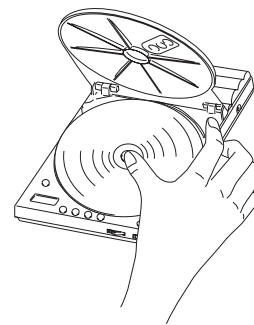
- 1 Press the **Open** button to open the disk cover.



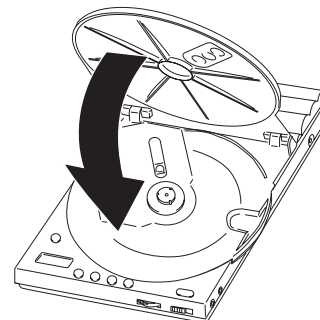
Attention

Do not touch the disk until it comes to a complete stop.

- 2 Lift the disk by its edge while pressing the pivot.



- 3 Close the cover.



Changing Modes

You can switch between normal mode (up to 20 times the speed of an ordinary CD player) and power-saving mode (up to 10 times the speed of an ordinary CD player) with the **Mode Selection** button.

The default mode (data transfer rate) varies with the type of power supply.

Power	Mode
AC Adapter	Normal mode (up to 20 times the speed of an ordinary CD player)
Battery pack Alkaline batteries	Power-saving mode (up to 10 times the speed of an ordinary CD player)

Attention

Do not press the **Mode Selection** button when the in-use (Ⓜ) indicator is on.

Note

The data transfer rate might be slower than 20 times the speed of an ordinary CD player, depending on the system configuration.

Switching to Power-Saving Mode

- 1 Press the **Mode Selection** button d(Ⓜ).
- 2 Confirm that **Lo** is displayed in the indicator panel.

Switching to Normal Mode

- 1 Press the **Mode Selection** button (Ⓜ).
- 2 Confirm that **Hi** is displayed in the indicator panel.

Note

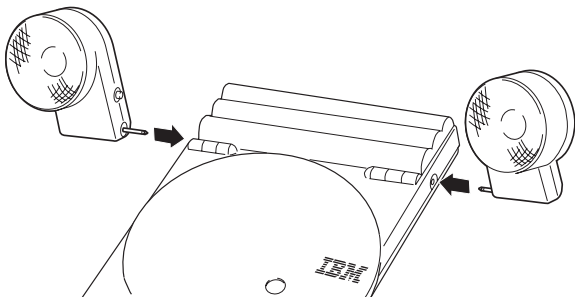
The two modes are for use only with data CDs; when you use audio CDs, the CD-ROM drive will automatically use power-saving mode and will run at the speed of an ordinary CD player.

Mounting the Speakers (Stereo Model Only)

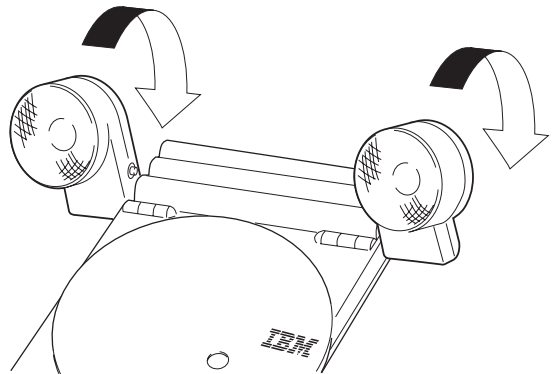
With the removable speakers attached to the stereo model, you can listen to an audio CD or to PCM/MIDI sounds generated by your computer. You can either mount the speakers directly onto the CD-ROM drive, or you can mount them on the included clips, which you can use to attach the speakers to the sides of your portable computer.

Mounting Directly on the Drive

- 1 Insert each speaker into its jack on the stereo model, as shown.



- 2 Rotate the angle of each speaker as desired.

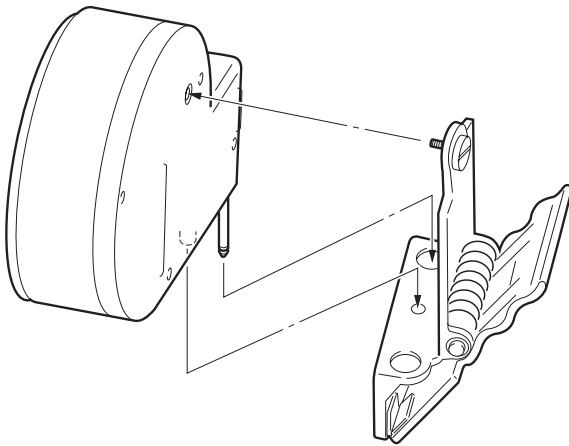


Attention

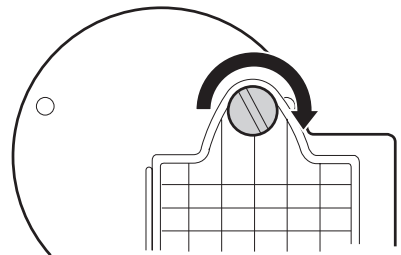
Do not lift the stereo model by the speakers. Doing so might damage the drive or the speakers.

Mounting on the Speaker Clips

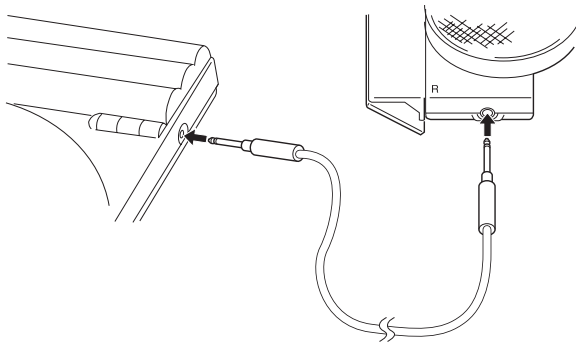
1 Attach each speaker to a speaker clip, as shown below.



2 Fasten each clip to its speaker with the screw. With a coin, tighten the screw firmly clockwise.



- 3 Connect the CD-ROM drive to the speakers with the speaker cables.



You can now clip the speakers to the sides of your laptop monitor, to enhance your enjoyment of the stereo sound.

Using the CD-ROM Drive

Before using the unit as a CD-ROM drive, confirm the following:

- Has the required software been installed? (See page 2-13.)
- Is the power source connected? (See page 2-6.)

Keep the following points in mind before using the CD-ROM drive:

- When removing the PC Card under Windows 95, open **PC Card** in **My Computer** and select **IBM IDE PC Card**, then click on the **Stop** button.
- Windows NT does not support hot plugging (inserting the PC Card while your computer is on). Turn on the CD-ROM drive only after it has been connected to your computer; then start Windows NT.
- Some configurations might not allow using a PC Card and a network card at the same time.

Perform the following steps to connect the CD-ROM drive to your computer:

- 1 Turn on the computer.
- 2 Insert the PC Card into the PC Card slot of your computer while the CD-ROM drive is on.

The 20X Max Portable CD-ROM Drive supports Plug and Play. Once you have can use the drive simply by connecting the CD-ROM drive to the PC Card and plugging in the PC Card.

You can remove the PC Card while your computer is on. **Do not remove the PC Card while the CD-ROM is being accessed.** You might damage the drive.

- 3 Open the disk cover and insert a CD-ROM disk.

With DOS

The following message is displayed, and a drive letter is assigned to the CD-ROM drive. The CD-ROM drive uses the letter D in the following cases:

```
MSCDEX version 2.25  
Copyright (C) Microsoft Corp. 1986-1995, All rights reserved.
```

```
Drive D:=Driver PCMCD001 unit 0
```

- a. Enter `dir d:` from the DOS prompt then press **Enter**.
- b. You can now access the CD-ROM.

With Windows 3.11

- a. Open **File Manager**.
- b. Check that the CD-ROM icon is displayed.
- c. Click on the CD-ROM icon to access the CD-ROM.

With Windows 95

- a. Click on **My Computer**.
- b. Check that the CD-ROM icon is displayed.
- c. Click on the CD-ROM icon to access the CD-ROM.

With Windows NT 3.51

- a. Open on **Main** and click on **File Manager**.
- b. Check that the CD-ROM icon is displayed.

- c. Click on the CD-ROM icon and check the access to the CD-ROM.

With Windows NT 4.0

- a. Click on **My Computer**.
- b. Check that the CD-ROM icon is displayed.
- c. Click on the CD-ROM icon to access the CD-ROM.

With OS/2 Warp

- a. Open **OS/2 System**, and then open **Drive**.
- b. Check that the CD-ROM icon is displayed.
- c. Click on the CD-ROM icon to access the CD-ROM.

Playing a Game (Windows 95 Only)

- 1 Check that the CD-ROM drive is off, and connect a joystick or gamepad to the game port connector.
- 2 Connect the interface cable to the PC Card and the CD-ROM drive (see page 2-12). Then turn on the CD-ROM drive.
- 3 Insert the PC Card into your computer (see page 2-13) and start your computer.
- 4 Open **Control Panel** in **My Computer**, double-click on the **Joystick** icon, select the type of your device, and run **Calibrate** and **Test**.
- 5 Insert the CD-ROM for a Windows 95-compatible (32-bit) game into the CD-ROM drive.

Notes

- DOS games or Windows 95 MS-DOS (16-bit) games cannot be played in the CD-ROM drive.
- Some digital gamepads and joysticks cannot be used.

Using the CD-ROM Drive as an External CD Player

With Windows 3.11 or Windows NT 3.51

1. Select **Accessories**.
2. Select **Media Player**; then click on **Device**.
3. Select and start **CD Audio**. For more information, refer to the Windows manual.

With Windows 95 or Windows NT 4.0

1. Click on **Start**.
2. Move the cursor in the following order to:
 - **Programs**
 - **Accessories**
 - **Multimedia**
 - **Media Player**
3. Open **Media Player**.
4. Click on **Device**.
5. Select and start **CD Audio**. For more information, refer to the Windows 95 or Windows NT manual.

With OS/2 Warp

1. Open **Multimedia**.
2. Select and start **Compact Disk**. For more information, refer to the OS/2 manual.

With Other Operating Systems





Install the software, and then play the CD according to the requirements described in the software manual.

Attention

If you play an audio CD with the base model CD-ROM drive, sound will not be generated even if the drive is connected to your computer and your computer has built in speakers. You must use headphones to listen to audio CDs with the base model.

Using the CD-ROM Drive as a Stand-Alone Audio CD Player

To use the CD-ROM drive to play an audio CD, use the buttons on the front of the drive. The table below gives the name of each button and the icon depicted on it, and gives a description of each button's function.

Button	Function
 Play/Pause	Pressing once begins play; pressing twice pauses current track.
 Stop	Stops playing an audio CD.
 Skip (forward)	Skips to the beginning of the next track when pressed once. When pressed and held, will fast forward within the same audio track.
 Skip (backward)	Returns to the beginning of the current track when pressed once. When pressed and held, will rewind within the same audio track.

- To play an audio CD through the CD-ROM drive connected to external speakers, use the line output jack (🔊) of the CD-ROM drive.
- To hear an audio CD through headphones, insert the plug into the headphone jack (🎧) of the CD-ROM drive.

Guard-Against-Dropout Function

Slight shocks to a CD player can cause the audio track to hesitate. The 20X Max Portable CD-ROM Drive has a special function to reduce this kind of dropout. The CD-ROM drive reads ahead on audio CDs and keeps 2.8 seconds of the current track in memory. This reduces interruptions to playback that can occur if the CD-ROM drive is moved or bumped.

Attention

Do not set the CD-ROM drive near electronic equipment.

Do not use the CD-ROM drive near electronic equipment such as televisions or stereo speakers. The CD-ROM drive processes a weak electric signal that might be affected by electromagnetic fields.

Using Sound Functions (Stereo Model Only)

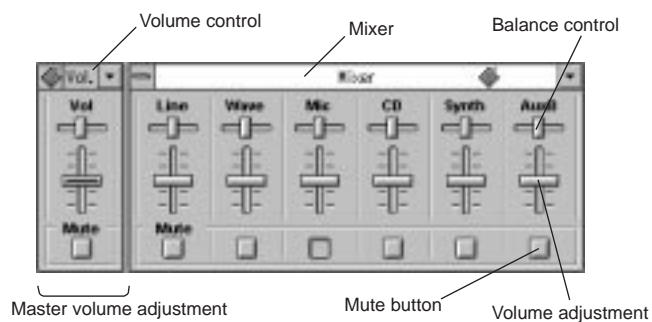
This section provides simple examples of Windows 3.11 CD-ROM drive sound function applications. To use similar functions with OS/2 and Windows 95, refer to the user's guide provided with each application program. Confirm that the audio device driver has been installed (see page 2-14).

If the audio device driver installed correctly, the Audio Application group is available.

Mixing

- 1 From **Audio Application**, open **Mixer** and **Volume Control**.
- 2 Connect a microphone. In **Mixer** you can adjust the volume of the sound source to be mixed, and also adjust the volume balance between the right and left speakers.

Use **Media Player** in **Accessories** to play .WAV and MIDI files.
- 3 Use **Volume Control** to adjust the master volume.

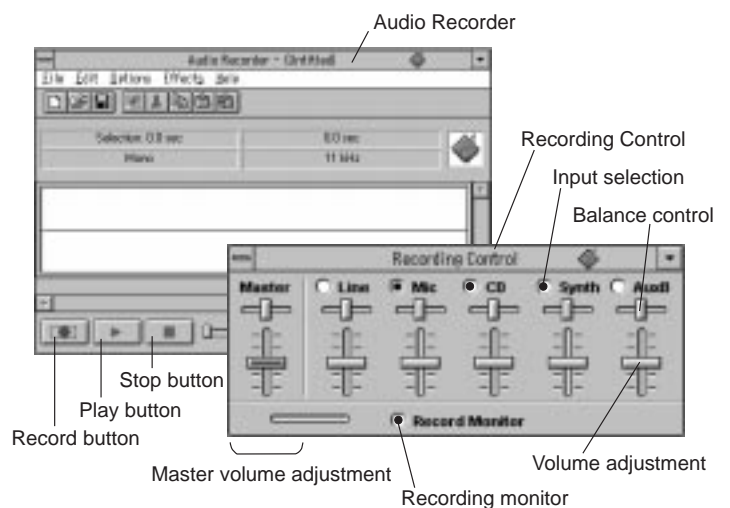


You can also mix recordings from your CD with a live recording in digital. For further information, see “Digital Recording.”

Digital Recording

- 1 Open **Recording Control** and **Audio Recorder**.
- 2 Select the sound source to be recorded from **Recording Control**. Then adjust the volume of the sound and the volume balance between the right and left speakers.
- 3 Press the **Record** button of **Audio Recorder** to start recording.
- 4 Press the **Stop** button to stop recording.
- 5 Press the **Play** button to play the recording.
- 6 Select **File** from the menu bar.

- 7 Select **Save as** and specify a file name. You can save the recording as a WAVE file.



Maintaining the Drive

Use the following instructions to clean your drive and CDs:

- **Cleaning the Surface of the CD-ROM Drive:** Lightly wipe the CD-ROM drive with a dry soft cloth. If stains remain on the surface, use a damp cloth (soak cloth in a diluted mild detergent and squeeze it firmly). Do not use solvents such as thinner, alcohol, and benzene. They cause deformation and discoloration.
- **Cleaning the Lens:** If the lens is dirty, the CD-ROM drive might not operate correctly. Clean the lens with a CD lens cleaner (available at stores).
- **Cleaning the CD:** Clean the CD with a soft cloth from the center to the outside radially. If stains remain on the disk, clean it with a damp cloth (soak cloth in water and squeeze it firmly). Then, wipe the disk with a dry soft cloth. Do not use record cleaner or antistatic spray.

Appendix A.
Safety Information

name=d3qy9501depth=24p.

取外し時：

⚠ 危険：

電源、電話及び通信ケーブルからの電流は危険なものです。電気ショックの危険を避けるために、この製品をインストールするためにコンピューターのカバーを取外す前に、次の順序でケーブルを取外してください。

- すべての電源を切ってください。
- 始めにコンセントから電源コードを取外してください。
- コネクターから通信ケーブルを取外してください。
- 装置から全てのケーブルを取外してください。

Per scollegare:

⚠ Pericolo:

La corrente elettrica che attraversa i cavi di alimentazione, i cavi telefonici e i cavi per le comunicazioni è pericolosa. Per evitare il rischio di scosse elettriche, prima di procedere all'apertura del coperchio dell'elaboratore per installare il dispositivo, scollegare i cavi nel modo qui indicato. Il cavo di alimentazione deve essere inserito in una presa elettrica collegata correttamente a terra.

- Spegnerne tutto (posizione OFF).
- Innanzitutto, scollegare il cavo di alimentazione dalla presa. (nel Regno Unito, per disposizione di legge, è obbligatorio scollegare il cavo di alimentazione dopo aver scollegato il cavo telefonico).
- Scollegare i cavi di segnale dai connettori.
- Scollegare tutti i cavi dai dispositivi.

Para desligar

⚠ Perigo:

A corrente elétrica da unidade de alimentação, do telefone e dos cabos de comunicação é perigosa. Para evitar o risco de choques elétricos, desligue os cabos de acordo com as instruções relativas à instalação antes de abrir as tampas do computador para instalar este produto. O cabo de alimentação deve ser usado numa tomada devidamente ligada à terra.

- Desligue tudo
- Primeiro remova o cabo de alimentação da tomada. (De acordo com as leis do Reino Unido, o cabo de alimentação deve ser desligado depois do cabo da linha telefônica.)
- Remova os cabos de sinal dos receptáculos.
- Remova todos os cabos dos dispositivos.

Odpojení:

⚠ Výstraha:

Elektrický proud ze sit'ových, telefonních a komunikačních kabelů je nebezpečný. Abyste při instalaci tohoto výrobku předešli úrazu elektrickým proudem, před otevřením krytů počítače odpojte kabely dle obrázku. Sit'ový kabel musí být použit s řádně uzemněnou zásuvkou.

- Vypněte všechna připojená zařízení.
- Nejdříve odpojte sit'ový kabel ze zásuvky. (Ve Spojeném království musí být podle zákona sit'ový kabel odpojen až po odpojení telefonní přípojky).
- Odpojte signálové kabely.
- Odpojte všechny kabely periferních zařízení.

Læs følgende inden frakobling:

⚠ Fare:

Elektrisk strøm fra strømførende kabler og telefon- og kommunikationskabler er farlig. For at undgå elektrisk stød skal du sørge for at koble kablerne fra som vist, før du åbner computerens dæksler for at installere dette produkt. Den strømførende ledning skal tilsluttes en javdet stikkontakt.

- SLUK for alt.
- Fjern først den strømførende ledning fra stikkantaten. (I Storbritannien skal den strømførende ledning frakobles efter telefonkablet iflg. lov).
- Fjern signalkabler fra kontakter.
- Fjern alle kabler fra enheder.

Ontkoppelen

Gevaarlijk:

Elektrische stroom afkomstig uit netsnoeren, telefoonkabels en communicatiekabels kan gevaarlijk zijn. Als u dit produkt wilt installeren, moet u, ter voorkoming van elektrische schokken, voordat u de computer openmaakt de kabels, zoals afgebeeld, ontkoppelen. Sluit het netsnoer altijd aan op een geaard stopcontact.

- Zet alles UIT.
- Haal eerst de stekker uit het stopcontact. (In het Verenigd Koninkrijk bent u wettelijk verplicht eerst de telefoonkabel en pas dan het netsnoer los te maken.)
- Haal de signaalkabels uit de ingangen.
- Verwijder alle kabels van de apparaten.

Pour déconnecter

Danger:

Le courant électrique des câbles électriques, téléphoniques et de communication est dangereux. Pour éviter tout risque d'électrocution lors de l'installation de ce produit, déconnectez les câbles tel que montré avant d'ouvrir les couvercles de l'ordinateur. Utilisez le câble d'alimentation avec une prise correctement raccordée à la terre.

- Éteignez tous les appareils.
- Débranchez d'abord le câble d'alimentation de la prise de courant. (Au Royaume-Uni, la réglementation exige que le câble d'alimentation soit débranché après le câble téléphonique.)
- Débranchez les câbles de transmission du signal des prises femelles.
- Débranchez tous les câbles des appareils.

Irrota laite seuraavasti:

Vaara:

Virta-, puhelin- ja tietoliikennejohdoissa liikkuva sähkövirta on vaarallista. Voit tätä laitetta asentaessasi välttää sähköiskut irrottamalla johtimet esitetyllä tavalla ennen tietokoneen kansion avaamista. Virtajohto on liitettävä oikein maadoitettuun pistorasiaan.

- Katkaise kaikista laitteista virta.
- Irrota virtajohto pistorasiasta. (Yhdistyneiden Kuningaskuntien lain mukaan virtajohto on irrottettava ennen puhelinjohdon irrottamista.)
- Irrota signaalkaapelit vastakkeista.
- Irrota kaikki johdot laitteista.

כדי לנתק:

סכנה:

זרם חשמלי מכבלי כח, טלפון ותקשורת מהווה סכנה. כדי למנוע התחשמלות, נתק את הכבלים לפי האיור לפני פתיחת מארז המחשב לשם התקנת מכשיר זה. את כבל החשמל יש לחבר לשקע מוארק כראוי.

- כבה את כל המפסקים.
- נתק תחילה את כבל החשמל מהשקע (בבריטניה החוק דורש לנתק את כבל החשמל אחרי כבל הטלפון).
- נתק את כבלי האותות משקעיהם.
- נתק את כל הכבלים מההתקנים השונים.

Szétcsatlakoztatás

Balesetveszély:

A hálózati, telefon és kommunikációs kábelben levő elektromos áram veszélyes. Az áramütés veszélyének elhárítása érdekében, a termék beszerelésekor, a számítógép burkolatának felnyitása előtt húzza ki a vezetékeket. A hálózati vezetéknek megfelelően földeltnek kell lennie.

- Kapcsoljon mindent KI.
- Először a hálózati vezetéket húzza ki az aljzatból. (Az Egyesült Királyságban előírás, hogy a hálózati vezetéket a telefonvezeték után kell szétcsatlakoztatni.)
- Húzza ki a jel-kábelt az aljzatából.
- Húzza ki az összes vezetéket a berendezésekből.

차단하려면 :

⚠ 위험 :

전원, 전화, 통신 케이블에서 나오는 전류는 유해하다. 쇼크 위험을 없애려면 본 제품 설치를 위해 컴퓨터 뚜껑을 열기 전에 케이블을 차단한다. 전원 코드는 제대로 접지된 콘덴사와 사용돼야 한다.

- 모든 전원을 차단한다.
- 우선 콘덴사에서 전원 코드를 뺀다. (영국에서는 법으로, 전화선을 뺀 다음 전원 코드를 차단해야 한다.)
- 수신기로 부터 신축 케이블을 뺀다.
- 컴퓨터 장치에서 모든 케이블을 뺀다.

Frakobling

⚠ Fare:

Elektrisk strøm fra strøm -, telefon - og kommunikasjonskabler er farlig. For å unngå fare for støt, må du koble fra kabler, som vist, før du åpner datamaskindeksler for å installere dette produktet. Strømledningen må kun brukes i jordede stikkontakter.

- Slå alt AV.
- Trekk først ut strømledningen fra stikkontakten. (I Storbritannia sier loven at strømledningen må kobles fra etter telefonledningen.)
- Trekk ut signalkablene fra kontaktene.
- Trekk ut alle kablene fra enhetene.

Aby rozłączyć:

⚠ Ostrzeżenie:

Prąd elektryczny obecny w kablach zasilania, telefonicznych lub komunikacyjnych jest niebezpieczny. Aby uniknąć niebezpieczeństwa porażenia, przed otwarciem pokrywy komputera w celu zainstalowania tego wyrobu, należy odłączyć kable, jak to zostało pokazane. Musi być użyty przewód zasilania elektrycznego z odpowiednim uziemieniem.

- Wyłącz wszystko (położenie OFF).
- W pierwszej kolejności odłącz przewód zasilania elektrycznego z gniazdka. (W Wielkiej Brytanii prawo nakazuje, by przewód zasilania został odłączony po kablu linii telefonicznej).
- Wyłącz kable sygnałowe z gniazdek.
- Wyłącz wszystkie kable z urządzeń.

Para desligar:

⚠ Perigo:

A corrente eléctrica da unidade de alimentação, do telefone e dos cabos de comunicação é perigosa. Para evitar o risco de choques eléctricos, desligue o cabo de acordo com as indicações antes de abrir a caixa do computador para instalar este produto. O cabo de alimentação deve ser utilizado numa tomada devidamente ligada à terra.

- Desligue tudo.
- Primeiro, retire o cabo de alimentação da tomada. (De acordo com as leis do Reino Unido, o cabo de alimentação deve ser desligado depois do cabo da linha telefónica.)
- Retire os cabos de sinal das tomadas.
- Retire todos os cabos dos dispositivos.

斷開步驟 :

⚠ 危險 :

動力電纜、電話電纜和通信電纜上的電流是危險的。為避免電擊危險，在打開電腦機蓋安裝本產品之前斷開電纜，如圖所示。動力電纜必須妥善接地。

- 關掉一切電源。
- 首先將動力電纜從輸出端取下。(根據英國法律規定，動力電纜必須在電話電纜之後斷開。)
- 從插座上取下信號電纜。
- 從裝置上取下所有電纜。

Izključenje:

⚠ Nevarnost:

Struja iz električnega, telefonskega ali komunikacijskega voda je nevarna. V namenu, da se izognete šoku, izključite vode, kot kaže slika, preden dvignete računalniške pokrove, da bi napravo instalirali. Strujni vod je treba uporabljati s primerno ozemljitvijo.

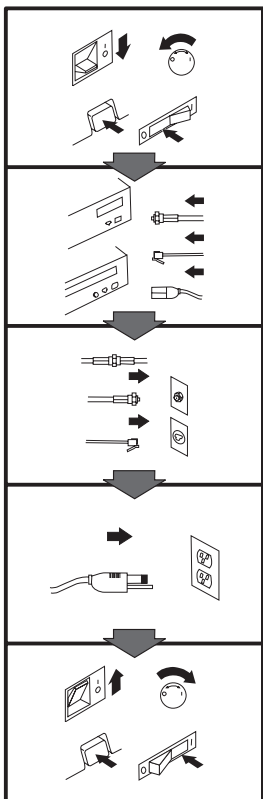
- Izključite vse (na "OFF").
- Najprej odstranite strujni vod iz izhodnega vtikaljšča. (V Veliki Britaniji je po zakonu treba strujni vod izključiti po telefonskem vodu).
- Odstranite signalne vode iz sprejemnikov.
- Odstranite vse vode iz naprav.

Urkoppling

⚠ Fara:

Ström från el-, tele- och kommunikationskablar måste behandlas med försiktighet. För att undvika att få en elektrisk stöt måste du innan du öppnar höljet på datorn koppla ur kablarna enligt beskrivningen nedan. Strömkabeln måste alltid användas i ett jordat uttag.

- Stäng av allting.
- Ta först ur strömkabeln från strömuttaget. (I Storbritannien måste enligt lag strömkabeln tas ur efter telefonkabeln.)
- Ta bort signalkablarna från uttagen.
- Ta bort alla kablarna från enheterna.



To Connect:

⚠ Danger:

Electrical current from power, telephone, and communication cables is hazardous. To avoid shock hazard, connect cables as shown after closing the computer covers. The power cord must be used with a properly grounded outlet.

- Turn everything OFF.
- Attach all cables to devices. (In the U.K., by law, the telephone cable must be connected after the power cord.)
- Attach signal cables to receptacles.
- Attach power cord to outlet.
- Turn device ON.

Vor dem Anschließen:

⚠ Vorsicht:

Befolgen Sie die folgenden Schritte, um gesundheitliche Schäden durch stromführende Telefon- und Verbindungskabel auszuschließen. Um eine Berührungsspannung zu vermeiden, Kabel nach dem Schließen der Computerabdeckungen, wie abgebildet, anschließen. Das Netzkabel darf nur an eine ordnungsgemäß geerdete Steckdose angeschlossen werden.

- Schalten Sie alle Geräte AUS.
- Schließen Sie alle Kabel an die Geräte an.
- Schließen Sie die Signalkabel an die dafür vorgesehenen Anschlußbuchsen an.
- Verbinden Sie das Netzkabel mit der Steckdose.
- Schalten Sie das Gerät EIN.

Avant de vous connecter

⚠ Danger:

Le courant électrique des câbles électriques, téléphoniques et de communication est dangereux. Pour éviter tout risque d'électrocution, connectez les câbles comme indiqué après avoir replacé les capots de l'ordinateur. Il convient d'utiliser le câble d'alimentation avec une prise correctement raccordée à la terre.

- Mettez tous les appareils hors tension.
- Raccordez l'ensemble des câbles aux périphériques. (Au Royaume-Uni, la législation exige que le câble téléphonique soit branché après le câble d'alimentation).
- Raccordez les câbles de signalisation aux prises femelles.
- Raccordez le câble d'alimentation à la prise de courant.
- Mettez les appareils sous tension.

Para conectarse

⚠ Peligro:

La corriente eléctrica procedente de cables de alimentación, teléfono y comunicaciones es peligrosa. Para evitar descargas eléctricas, conecte los cables tal y como se muestra después de cerrar las cubiertas del ordenador. El cable de alimentación debe utilizarse con una toma debidamente conectada a tierra.

- Desconecte todo.
- Conecte todos los cables a los dispositivos. (En el Reino Unido, la legislación determina que el cable de teléfono se conecte después del cable de alimentación.)
- Conecte los cables de señal de los receptáculos correspondientes.
- Conecte el cable de alimentación a una toma.
- Active el dispositivo.

接続時：

⚠ 危険：

電源、電話及び通信ケーブルからの電流は危険なものです。電気ショックの危険を避けるために、コンピューターのカバーを取り付け後に、次の順序でケーブルを接続してください。

- すべての電源を切ってください。
- すべてのケーブルを装置に接続してください。
- コネクタに通信ケーブルを接続してください。
- コンセントに電源コードを接続してください。
- 装置の電源を入れてください。

Per collegare:

⚠ Pericolo

La corrente elettrica che attraversa i cavi di alimentazione, i cavi telefonici e i cavi per le comunicazioni è pericolosa. Per evitare il rischio di scosse elettriche, collegare i cavi nel modo qui indicato solo dopo aver richiuso l'elaboratore con il coperchio. Il cavo di alimentazione deve essere inserito in una presa elettrica collegata correttamente a terra.

- Spegnere tutto (posizione OFF).
- Collegare tutti i cavi ai dispositivi. (nel Regno Unito, per disposizione di legge, è obbligatorio collegare il cavo telefonico dopo aver collegato il cavo di alimentazione).
- Collegare i cavi di segnale agli appositi connettori.
- Collegare il cavo di alimentazione a una presa elettrica
- Accendere la periferica (posizione ON)

Para ligar:

⚠ Perigo:

A corrente elétrica da unidade de alimentação, do telefone e dos cabos de comunicação é perigosa. Para evitar o risco de choques elétricos, ligue os cabos de acordo com as instruções relativas à instalação depois de fechar as tampas do computador. O cabo de alimentação deve ser usado numa tomada devidamente ligada à terra.

- Desligue tudo
- Ligue os cabos aos dispositivos. (De acordo com as leis do Reino Unido, o cabo de alimentação deve ser desligado depois do cabo da linha telefônica.)
- Ligue os cabos de sinal aos receptáculos.
- Ligue o cabo de alimentação à tomada.
- Ligue o dispositivo.

Připojení:

⚠ Výstraha:

Elektrický proud ze síťových, telefonních a komunikačních kabelů je nebezpečný. Abyste předešli úrazu elektrickým proudem, kabely dle obrázku připojte až po uzavření krytů počítače. Síťový kabel musí být použit s řádně uzemněnou zásuvkou.

- Vypněte všechna zařízení.
- Připojte všechny kabely periferních zařízení. (Ve Spojeném království musí být podle zákona telefonní přípojka připojena až po připojení síťového kabelu).
- Připojte signálové kabely.
- Připojte síťový kabel do zásuvky.
- Zapněte přístroj.

Læs følgende inden tilkobling:

⚠ Fare:

Elektrisk strøm fra strømførende kabler og telefon- og kommunikationskabler er farlig. For at undgå elektrisk stød skal du sørge for at koble kablerne til som vist, før du lukker computerens dæksler igen. Den strømførende ledning skal tilsluttes en jvdet stikkontakt.

- SLUK for alt.
- Tilslut alle kabler til enheder. (I Storbritannien skal telefonkablet tilsluttes efter den strømførende ledning iflg. lov).
- Tilslut signalkabler til kontakter.
- Tilslut den strømførende ledning til stikkontakten.
- TÆND for enheden.

Aansluiten

Gevaarlijk:

Elektrische stroom afkomstig uit netsnoeren, telefoonkabels en communicatiekabels kan gevaarlijk zijn. Ter voorkoming van elektrische schokken, moet u nadat de computer dichtgemaakt is de kabels, zoals afgebeeld, aansluiten. Sluit het netsnoer altijd aan op een geaard stopcontact.

- Zet alles UIT.
- Bevestig de snoeren aan de apparaten. (In het Verenigd Koninkrijk bent u wettelijk verplicht eerst het netsnoer en pas dan de telefoonkabel aan te sluiten.)
- Bevestig de signaalkabels in de juiste ingangen.
- Steek de stekker van het netsnoer in het stopcontact.
- Zet het apparaat AAN.

Pour connecter

Danger:

Le courant électrique des câbles électriques, téléphoniques et de communication est dangereux. Pour éviter tout risque d'électrocution, connectez les câbles tel que montré après avoir fermé les couvercles de l'ordinateur. Utilisez le câble d'alimentation avec une prise correctement raccordée à la terre.

- Mettez tous les appareils hors tension.
- Raccordez tous les câbles aux appareils. (Au Royaume-Uni, la réglementation exige que le câble téléphonique soit branché après le câble d'alimentation.)
- Raccordez les câbles de transmission du signal aux prises femelles.
- Raccordez le câble d'alimentation à la prise de courant.
- Mettez l'appareil sous tension.

Kytke seuraavasti:

Vaara:

Virta-, puhelin- ja tietoliikennejohdoissa liikkuva sähkövirta on vaarallista. Voit välttää sähköiskut liittämällä johdot esitetyllä tavalla, sen jälkeen kun olet sulkenut tietokoneen kannet. Virtajohto on liitettävä oikein maadoitettuun pistorasiaan.

- Katkaise kaikista laitteista virta.
- Liitä kaikki johdot laitteisiin. (Yhdistyneiden Kuningaskuntien lain mukaan virtajohto on liitettävä ennen puhelinjohdon irrottamista.)
- Liitä signaali kaapelit vastakkeisiin.
- Liitä virtajohto pistorasiaan.
- Kytke laitteeseen virta.

כדי לחבר:

סכנה:

זרם חשמלי מכבלי כח, טלפון ותקשורת מהווה סכנה. כדי למנוע התחשמלות, חבר את הכבלים לפי האיור אחרי סגירת מארז המחשב. את כבל החשמל יש לחבר לשקע מוארק כראוי.

- כבה את כל המפסקים.
- חבר את כל הכבלים להתקנים (בבריטניה החוק דורש לחבר את כבל הטלפון אחרי כבל החשמל).
- חבר את כבלי האותות לשקעיהם.
- חבר את כבל החשמל לשקע.
- הדלק את המכשיר.

Csatlakoztatás:

Balesetveszély:

A hálózati, telefon és kommunikációs kábelben levő elektromos áram veszélyes. Az áramütés veszélyének elhárítása érdekében csak a számítógép burkolatának bezárása után csatlakeztassa a vezetékeket. A hálózati vezetéknek megfelelően földeltnek kell lennie.

- Kapcsoljon mindent KI.
- Csatlakoztassa a vezetékeket a berendezésekhez. (Az Egyesült Királyságban előírás, hogy a telefonvezetéket a hálózati vezeték után kell csatlakoztatni.)
- Csatlakoztassa a jel-kábelt az aljzatába.
- Csatlakoztassa a hálózati vezeték az aljzatába.
- Kapcsolja BE a készüléket.

연결하려면 :

⚠ 위험 :

전원, 전화, 통신 케이블에서 나오는 전류는 유해하다. 쇼크 위험을 없애려면 본 제품 설치를 위해 컴퓨터 뚜껑을 닫은 후에 케이블을 연결한다. 전원 코드는 제대로 접지된 콘덴사와 사용돼야 한다.

- 모든 전원을 차단한다.
- 장치에 모든 케이블을 연결한다. (영국에서는 법으로, 전화선을 먼저 연결한 다음 전원코드를 연결해야 한다.)
- 수신기에 신호 케이블을 연결한다.
- 콘텐사에 전원 코드를 연결한다.
- 컴퓨터 장치를 켜다.

Tilkobling

⚠ Fare:

Elektrisk strøm fra strøm -, telefon - og kommunikasjonskabler er farlig. For å unngå fare for støt, må du koble til kabler, som vist, etter at datamaskindekslene er lukket. Strømledningen må kun brukes i jordede stikkontakter.

- Slå alt AV.
- Koble alle kablene til enhetene. (I Storbritannia sier loven at telefonledningen må kobles til etter strømledningen.)
- Sett signalkablene i kontaktene.
- Sett strømledningen i stikkontakten.
- Slå apparatet PÅ.

Aby podłączyć:

⚠ Ostrzeżenie:

Prąd elektryczny obecny w kablach zasilania, telefonicznych lub komunikacyjnych jest niebezpieczny. Aby uniknąć porażenia, po zamknięciu pokryw komputera podłącz kable jak to zostało pokazane. Musi być użyty przewód zasilania elektrycznego z odpowiednim uziemieniem.

- Wyłącz wszystko (położenie OFF)
- Podłącz wszystkie kable do urządzeń (W Wielkiej Brytanii prawo nakazuje by kabel linii telefonicznej zostać podłączony po przewodzie zasilania).
- Podłącz kable sygnałowe do gniazdek.
- Podłącz przewód zasilania do gniazdk.
- Włącz urządzenie. (Polożenie ON).

Para ligar:

⚠ Perigo:

A corrente eléctrica da unidade de alimentação, do telefone e dos cabos de comunicação é perigosa. Para evitar o risco de choques eléctricos, ligue os cabos de acordo com as indicações antes de fechar a caixa do computador. O cabo de alimentação deve ser utilizado numa tomada devidamente ligada à terra.

- Desligue tudo.
- Ligue os cabos aos dispositivos. (De acordo com as leis do Reino Unido, o cabo do telefone deve ser ligado depois do cabo de alimentação.)
- Ligue os cabos de sinal as tomadas.
- Ligue o cabo de alimentação à tomada.
- Ligue o dispositivo.

連接步驟 :

⚠ 危險 :

動力電纜、電話電纜和通信電纜上的電流是危險的。為避免電擊危險，在蓋上電腦機蓋之後連接電纜，如圖所示。動力電纜必須妥善接地。

- 關掉一切電源。
- 將所有電纜連接於裝置。(根據英國法律規定，電話電纜必須在動力電纜之前連接。)
- 將信號電纜連接於插座。
- 將動力電纜連接於輸出端。
- 打開裝置電源。

Vključenje:

⚠ Nevarnost:

Struja iz električnih, telefonskih in komunikacijskih vodov je nevarna. Da se izognete šoku, vključite vode, kot kaže slika, po tem, ko ste zaprli računalniške pokrove. Strujni vod je treba uporabljati s primerno ozemljitvijo.

- Izključite vse (na "OFF").
- Priključite vse vode na napravo. (V Veliki Britaniji je po zakonu treba telefonski vod vključiti po strujnem vodu).
- Priključite signalne vode sprejemnikom.
- Priključite električni vod izhodnemu vtikalšču.
- Vključite napravo (na "ON").

Anslutning

⚠ Fara:

Ström från el-, tele- och kommunikationskablar måste behandlas med försiktighet. För att undvika att få en elektrisk stöt måste du sedan du stängt höljet på datorn ansluta kablarna enligt beskrivningen nedan. Strömkabeln måste alltid användas i ett jordat uttag.

- Stäng av allting.
- Anslut alla kablarna till enheterna. (I Storbritannien måste enligt lag telefonkabeln anslutas efter strömkabeln.)
- Anslut signalkablarna till uttagen.
- Anslut strömkabeln till strömuttaget.
- Slå på enheten.

Appendix B. Product Specifications

	Basic Model	Stereo Model
Power supply	100-127V/200-240V AC Adapter (provided) Ni-Cd battery pack (provided) AA alkaline batteries (available in stores)	
Interface	Type II PC Card (IDE)	
MPC standard	MPC3-compliant	
Buffer size	512KB	
Operating environment	Temperature: 5 to 40°C Humidity: 8 to 80%	
Storage environment	Temperature: -20 to 60°C Humidity: 5 to 95%	
Error rate	10xE-12 or less (hardware failure) 10xE-9 or less (software error)	
Outside dimensions (mm)	130.5 (width) × 203.5 (depth) × 32.5 (height)	
Weight	420g	520g
Access rate	150 msec (normal mode)	

	Basic Model	Stereo Model
Data transfer rate	Normal mode (up to 20 times the speed of an ordinary CD player) At inner radius of the disk: 1,300 KB/s, At outer radius of the disk: 3000 KB/s Power-saving mode (up to 10 times the speed of an ordinary CD player) At inner radius of the disk: 650 KB/s, At outer radius of the disk: 1500 KB/s	
Guard-against-dropout function	2.8 seconds	
Battery life	Power-saving mode	
	Ni-Cd: Approximately 1.8 hours	Ni-Cd: Approximately 1.5 hours
	Alkaline: Approximately 2.3 hours	Alkaline: Approximately 2.0 hours
	Normal mode	
Ni-Cd: Approximately 1.3 hours	Ni-Cd: Approximately 1.1 hours	
Alkaline: Approximately 1.7 hours	Alkaline: Approximately 1.5 hours	
Charging time	Approximately 5 hours	

	Basic Model	Stereo Model
I/O terminal	PHONE OUT LINE OUT Game port	PHONE OUT LINE OUT Game port MIC IN (Mono) LINE IN Speaker
Game port	D-SUB 15-pin	
Quantizing bit count		16-bit, 8-bit
Sampling frequency		11~44.1 KHz
S/N ratio	75 dB	
Speaker output		1 W + 1 W
Headphone output	8 mW~8 mW 16Ω	
Line output	0.85 Vrms	
Line input		4 Vp-pmax
Input impedance		30 K~100 KΩ
Mic input		10~125 mVp-p
Input impedance		200~100KΩ

Appendix C. Problem Solving

Problem	Response
No indicator appears when the power is turned on.	<ul style="list-style-type: none"> • Check if the AC Adapter is connected correctly. (See page 2-6.) • Check if the batteries are inserted correctly. (See page 2-10.) • Check if the battery pack is fully charged. (See page 2-8.) • Check if the batteries are dead.
The CD-ROM drive is not recognized on your computer.	<ul style="list-style-type: none"> • Check if the required software is installed correctly. (See page 2-13.) • Check if IRQ and I/O base address are available.
The CD-ROM fails to operate.	<ul style="list-style-type: none"> • Check if the interface card and cables are connected correctly. (See page 2-12.) • Check that the card and cable connectors are not bent or broken. If they are, contact the IBM Support Center. • Check if the disk is mounted properly. (See page 2-25.) • Check if the disk cover is closed firmly. (See page 2-25.) • Check if the audio CD can be played in the CD-ROM drive when the Play button on the front panel is pressed. • Check if the correct drive letter is being used. (See page 2-31.)

Problem	Response
No sound comes out of the speakers.	<ul style="list-style-type: none"> • Check if the headphones are connected. • Check that the volume control is high enough.
A CD can be played on the CD-ROM drive alone, but it cannot be played through your computer.	<ul style="list-style-type: none"> • Check if the required software is installed correctly. (See page 2-13.) • Check if the headphones or speakers are connected correctly. (See page 2-33.)
Sound volume to the headphones is too low.	Check if the headphones have been connected to the headphone jack.
No sound comes out.	Check if the sound specifications of your computer are appropriate. (See page 2-33.) Refer to the operating system or software manuals for further information.
The sound is strange, or data cannot be read.	<ul style="list-style-type: none"> • Clean the CD-ROM disk with a soft cloth starting from the center and moving to the outside radially. (Do not wipe in a circular motion.) • Clean the CD-ROM drive lens with a camera lens blower or with a CD lens cleaner (available in stores).

Appendix D. ***Help and Service Information***

During the warranty period, you can get toll-free technical support 24 hours a day, 7 days a week, to answer any questions about your new IBM option. If you need warranty service, return or exchange is available. In addition, if your IBM option is installed in an IBM computer, you might be entitled to service at your location. Your technical support representative can help you determine the best alternative.

Before calling, please prepare for your call by following these steps:

Step 1: Problem Solving

You might be able to solve the problem yourself. Before calling IBM, you might want to try some or all of the following troubleshooting procedures.

1. Disconnect the power cord from the computer and all attached devices.
2. Remove and reattach all option cables.
3. Remove and reseal the option.
4. Place the option in a different slot, if one is available.
5. If your option contains jumpers or switches, check that they are set as specified.
6. Reread any software instructions; be sure software settings are correct.
7. Inspect the option for damage, such as bent pins.

8. Check the computer manual for instructions about the installation of upgrades. Look for a section about system setup or system configuration. Follow all procedures.
9. After completing these steps, reassemble the computer and connect the power cord.

Step 2: Preparing for the Call

To assist the technical support representative, have available as much of the following information as possible:

1. Option name
2. Option number
3. Proof of purchase
4. Computer manufacturer, model, serial number (if IBM), and manual
5. Exact wording of the error message (if any)
6. Description of the problem
7. Hardware and software configuration information for your system

If possible, be at your computer. Your technical support representative might want to walk you through the problem during the call.

Step 3: Placing the Call to IBM

Technical support is available during the warranty period to answer any questions about your new IBM option. Response time will vary depending on the number and nature of calls received. Marketing, installation, and configuration support will be withdrawn from the PC Company HelpCenter 90 days after the option has been withdrawn from marketing.

If you call 90 days or more after the date of withdrawal or after your warranty has expired, you might be charged a fee.

For the support telephone number and support hours by country, refer to the following table or to the enclosed technical support insert. If the number is not provided, contact your IBM reseller or IBM marketing representative.

<i>Support 24 hours a day, 7 days a week</i>	
Canada	1-800-565-3344
U.S.A. / Puerto Rico	1-800-772-2227

Additional Technical Support Resources

Online technical support is available during the life of your product. Online assistance can be obtained through the IBM PC Company Automated Fax System, the PC Company Web page, and the PC Company Electronic Bulletin Board System.

<i>Online Technical Support</i>	
IBM PC Company Web Page	www.us.pc.ibm.com
IBM PC Company BBS	1-919-517-0001
IBM PC Company Automated Fax System	1-800-426-3395

Appendix E. Product Warranty and Notices

Warranty

The following warranty information applies to products purchased in the United States, Canada, and Puerto Rico.

The warranty terms and conditions applicable in the country of purchase are available from IBM or your reseller.

The following warranty information applies to products purchased in the United States, Canada, and Puerto Rico. For warranty terms and conditions for products purchased in other countries, see the enclosed Warranty insert, or contact your IBM reseller or IBM marketing representative.

International Business Machines Corporation

Armonk, New York, 10504

Statement of Limited Warranty

The warranties provided by IBM in this Statement of Limited Warranty apply only to Machines you originally purchase for your use, and not for resale, from IBM or your reseller. The term "Machine" means an IBM machine, its features, conversions, upgrades, elements, or accessories, or any combination of them. Unless IBM specifies otherwise, the following warranties apply only in the country where you acquire the Machine. If you have any questions, contact IBM or your reseller.

Machine: 20X Max Portable CD-ROM Drive

Warranty Period*: One Year

**Contact your place of purchase for warranty service information.*

Production Status

Each Machine is manufactured from new parts, or new and used parts. In some cases, the Machine may not be new and may have been previously installed. Regardless of the Machine's production status, IBM's warranty terms apply.

The IBM Warranty for Machines

IBM warrants that each Machine 1) is free from defects in materials and workmanship and 2) conforms to IBM's Official Published Specifications. The warranty period for a Machine is a specified, fixed period commencing on its Date of Installation. The date on your receipt is the Date of Installation, unless IBM or your reseller informs you otherwise.

During the warranty period IBM or your reseller, if authorized by IBM, will provide warranty service under the type of service designated for the Machine and will manage and install engineering changes that apply to the Machine.

For IBM or your reseller to provide warranty service for a feature, conversion, or upgrade, IBM or your reseller may require that the Machine on which it is installed be 1) for certain Machines, the designated, serial-numbered Machine and 2) at an engineering-change level compatible with the feature, conversion, or upgrade. Many of these transactions involve the removal of parts and their return to IBM. You represent that all removed parts are genuine and unaltered. A part that replaces a removed part will assume the warranty service status of the replaced part.

If a Machine does not function as warranted during the warranty period, IBM or your reseller will repair it or replace it with one that is at least functionally

equivalent, without charge. The replacement may not be new, but will be in good working order. If IBM or your reseller is unable to repair or replace the Machine, you may return it to your place of purchase and your money will be refunded.

If you transfer a Machine to another user, warranty service is available to that user for the remainder of the warranty period. You should give your proof of purchase and this Statement to that user. However, for Machines which have a life-time warranty, this warranty is not transferable.

Warranty Service

To obtain warranty service for the Machine, you should contact your reseller or call IBM. In the United States, call IBM at **1-800-772-2227**. In Canada, call IBM at **1-800-565-3344**. You may be required to present proof of purchase.

IBM or your reseller will provide certain types of repair and exchange service, either at your location or at IBM's or your reseller's service center, to restore a Machine to good working order.

When a type of service involves the exchange of a Machine or part, the item IBM or your reseller replaces becomes its property and the replacement becomes yours. You represent that all removed items are genuine and unaltered. The replacement may not be new, but will be in good working order and at least functionally equivalent to the item replaced. The replacement assumes the warranty service status of the replaced item. Before IBM or your reseller exchanges a Machine or part, you agree to remove all features, parts, options, alterations, and attachments not under warranty service. You also agree to ensure that the Machine is free of any legal obligations or restrictions that prevent its exchange.

You agree to:

1. obtain authorization from the owner to have IBM or your reseller service a Machine that you do not own; and
2. where applicable, before service is provided —

- a. follow the problem determination, problem analysis, and service request procedures that IBM or your reseller provide,
- b. secure all programs, data, and funds contained in a Machine, and
- c. inform IBM or your reseller of changes in a Machine's location.

IBM is responsible for loss of, or damage to, your Machine while it is 1) in IBM's possession or 2) in transit in those cases where IBM is responsible for the transportation charges.

Extent of Warranty

IBM does not warrant uninterrupted or error-free operation of a Machine.

The warranties may be voided by misuse, accident, modification, unsuitable physical or operating environment, improper maintenance by you, removal or alteration of Machine or parts identification labels, or failure caused by a product for which IBM is not responsible.

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Electronic Emission Notices

20X Max Portable CD-ROM Drive

Federal Communications Commission (FCC) Statement

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult an IBM authorized dealer or service representative for help.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. Proper cables and connectors are available from IBM authorized dealers. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Responsible Party:

International Business Machines Corporation
Old Orchard Road
Armonk, NY 10504
Telephone: 1-919-543-2193

Industry Canada Class B Emission Compliance Statement

This Class B digital apparatus meets the requirements of the Canadian Interference-Causing Equipment Regulations.

Avis de conformité à la réglementation d'Industrie Canada

Cet appareil numérique de la classe B respecte toutes les exigences du Règlement sur le matériel brouilleur du Canada.

Deutsche EMV-Direktive (electromagnetische Verträglichkeit)

Dieses Gerät ist berechtigt in Übereinstimmung mit dem deutschen EMVG vom 9.Nov.92 das EG-Konformitätszeichen zu führen.

Der Aussteller der Konformitätserklärung ist die IBM UK, Greenock.

Dieses Gerät erfüllt die Bedingungen der EN 55022 Klasse B.

European Union - Emission Directive

This product is in conformity with the protection requirements of EU Council Directive 89/366/ECC on the approximation of the laws of the Member States relating to electromagnetic compatibility.

IBM can not accept responsibility for any failure to satisfy the protection requirements resulting from a non-recommended modification of the product, including the fitting of non-IBM option cards.

This product has been tested and found to comply with the limits for Class B Information Technology Equipment according to CISPR 22 / European Standard EN 55022. The limits for Class B equipment were derived for typical residential environments to provide reasonable protection against interference with licensed communication devices.

Union Européenne - Directive Conformité électromagnétique

Ce produit est conforme aux exigences de protection de la Directive 89/336/EEC du Conseil de l'UE sur le rapprochement des lois des États membres en matière de compatibilité électromagnétique.

IBM ne peut accepter aucune responsabilité pour le manquement aux exigences de protection résultant d'une modification non recommandée du produit, y compris l'installation de cartes autres que les cartes IBM.

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Unione Europea - Direttiva EMC (Conformidad electromagnética)

Este producto satisface los requisitos de protección del Consejo de la UE, Directiva 89/336/CEE en lo que a la legislación de los Estados Miembros sobre compatibilidad electromagnética se refiere.

IBM no puede aceptar responsabilidad alguna si este producto deja de satisfacer dichos requisitos de protección como resultado de una modificación no recomendada del producto, incluyendo el ajuste de tarjetas de opción que no sean IBM.

Este producto ha sido probado y satisface los límites para Equipos Informáticos Clase B de conformidad con el Estándar CISPR22 y el Estándar Europeo EN 55022. Los límites para los equipos de Clase B se han establecido para entornos residenciales típicos a fin de proporcionar una protección razonable contra las interferencias con dispositivos de comunicación licenciados.

Union Europea - Normativa EMC

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